

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/581,088
Filing Date: 05/31/2006
Applicant: Hiroshi Oshitani, et al.
Group Art Unit: 3744
Examiner: Daniel C. Comings
Title: EJECTOR TYPE REFRIGERANT CYCLE DEVICE
Confirmation: 2089
Attorney Docket: 4041J-001125/NP

Director of The United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Sir:

In response to the Office Action mailed June 26, 2009, Paper No./Mail Date 20090611, please consider the following.

The Examiner has required restriction to one of the following inventions under 35 U.S.C. § 121:

Group 1. Claims 22, 25-27, 30, 33 and 50, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor and a branch passage having a second evaporator and a throttling

mechanism.

- Group 2. Claims 23, 28, 31, 34, 46 and 51, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism and a bypass for directing refrigerant directly from the compressor to the second evaporator.
- Group 3. Claims 24, 29, 32, 35 and 52, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism and a bypass for bypassing the throttling mechanism.
- Group 4. Claims 37 and 53, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism, a vapor liquid separator and a bypass for directing refrigerant directly from the compressor to the second evaporator.
- Group 5. Claims 38, 39, 44, 48 and 54, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, two throttling mechanisms at the outlet of the first evaporator and at the inlet of the second evaporator, respectively, and a controller for

controlling the throttling devices to introduce high temperature refrigerant to both evaporators for defrosting.

Group 6. Claims 40 and 41, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, two throttling mechanisms at the outlet of the first evaporator and at the inlet of the second evaporator, respectively, and a controller for controlling the throttling devices to introduce high temperature refrigerant to only the second evaporator for defrosting.

Group 7. Claims 42, 43, 45-47, 49 and 55, drawn to Group 6, Claims 40 and 41, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, a throttling mechanism at the inlet of the second evaporator, and a controller for controlling the throttling device to introduce high temperature refrigerant to both evaporators for defrosting.

Applicants respectfully traverse the restriction requirement. The Examiner states that the inventions listed in Group 1-7 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features. PCT Rule 13.1 and 13.2 define the requirements and circumstances in which the requirement of Unity of Invention is to be considered fulfilled. During the prosecution of the PCT application, the PCT Examiner did not find lack of unity of invention and therefore there is only one single general

inventive concept as defined by the PCT.

The PCT was filed with Claims 1-21. These claims were replaced by Claims 22-55 in a Preliminary Amendment filed with the applications. Claims 22-55 correspond to Claims 1-21 after Claims 1-21 are changed to eliminate the "characterized" language and the multiple dependent claims. Independent Claims 22, 23, 24, 37, 38, 40 and 42 correspond to original Claims 1, 2, 3, 10, 11, 13 and 15. Enclosed is a copy of original Claims 1-21. Because the PCT did not find lack of unity of invention, this finding by the Examiner using PCT Rules 13.1 and 13.2 is respectfully traversed.

Should the Examiner maintain this requirement, Applicants' request the Examiner to proceed with Group 1 defined by Claims 22, 25-27, 30, 33 and 50. Applicants request that the non-elected Claims be held in abeyance for further prosecution in future divisional and/or continuation applications.


CONCLUSION

It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this Response is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: August 5, 2009
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